



Fremont
Analytical

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NVL Labs, Inc.
Marcus Gladden
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Rainier Commons
Work Order Number: 1909266

September 30, 2019

Attention Marcus Gladden:

Fremont Analytical, Inc. received 2 sample(s) on 9/17/2019 for the analyses presented in the following report.

Polychlorinated Biphenyls (PCB) by EPA 8082

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Original

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RCLLC 0012090



CLIENT: NVL Labs, Inc.
Project: Rainier Commons
Work Order: 1909266

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1909266-001	91719-MH6-PCB	09/17/2019 11:00 AM	09/17/2019 12:58 PM
1909266-002	91719-MH28-PCB	09/17/2019 11:00 AM	09/17/2019 12:58 PM

CLIENT: NVL Labs, Inc.
Project: Rainier Commons

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Comments for METHOD (PREP-PCB-W-LL), SAMPLE (1909266-001A) required Acid Cleanup Procedure (Using Method No 3665A).

Prep Comments for METHOD (PREP-PCB-W-LL), SAMPLE (1909266-002A) required Acid Cleanup Procedure (Using Method No 3665A).

Prep Comments for METHOD (PREP-PCB-W-LL), SAMPLE (1909266-001A) required Florisil Cleanup Procedure (Using Method No 3620C).

Prep Comments for METHOD (PREP-PCB-W-LL), SAMPLE (1909266-002A) required Florisil Cleanup Procedure (Using Method No 3620C).

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1909266

Date Reported: 9/30/2019

Client: NVL Labs, Inc.

Collection Date: 9/17/2019 11:00:00 AM

Project: Rainier Commons

Lab ID: 1909266-001

Matrix: Stormwater

Client Sample ID: 91719-MH6-PCB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polychlorinated Biphenyls (PCB) by EPA 8082

Batch ID: 25940

Analyst: SB

Aroclor 1016	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1221	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1232	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1242	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1248	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1254	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1260	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1262	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Aroclor 1268	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Total PCBs	ND	0.00996		µg/L	1	9/27/2019 1:08:34 PM
Surr: Decachlorobiphenyl	96.5	5 - 159		%Rec	1	9/27/2019 1:08:34 PM
Surr: Tetrachloro-m-xylene	364	12.5 - 136	S	%Rec	1	9/27/2019 1:08:34 PM

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.



Analytical Report

Work Order: 1909266

Date Reported: 9/30/2019

Client: NVL Labs, Inc.

Collection Date: 9/17/2019 11:00:00 AM

Project: Rainier Commons

Lab ID: 1909266-002

Matrix: Stormwater

Client Sample ID: 91719-MH28-PCB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polychlorinated Biphenyls (PCB) by EPA 8082

Batch ID: 25940

Analyst: SB

Aroclor 1016	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1221	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1232	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1242	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1248	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1254	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1260	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1262	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Aroclor 1268	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Total PCBs	ND	0.00995		µg/L	1	9/27/2019 1:27:42 PM
Surr: Decachlorobiphenyl	30.9	5 - 159		%Rec	1	9/27/2019 1:27:42 PM
Surr: Tetrachloro-m-xylene	99.4	12.5 - 136		%Rec	1	9/27/2019 1:27:42 PM



Date: 9/30/2019

Work Order: 1909266
 CLIENT: NVL Labs, Inc.
 Project: Rainier Commons

QC SUMMARY REPORT
Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: MB-25940	SampType: MBLK	Units: µg/L			Prep Date: 9/25/2019			RunNo: 54237			
Client ID: MBLKW	Batch ID: 25940	Analysis Date: 9/27/2019							SeqNo: 1074225		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.00994									
Aroclor 1221	ND	0.00994									
Aroclor 1232	ND	0.00994									
Aroclor 1242	ND	0.00994									
Aroclor 1248	ND	0.00994									
Aroclor 1254	ND	0.00994									
Aroclor 1260	ND	0.00994									
Aroclor 1262	ND	0.00994									
Aroclor 1268	ND	0.00994									
Total PCBs	ND	0.00994									
Surr: Decachlorobiphenyl	214		198.8		108	5	159				
Surr: Tetrachloro-m-xylene	187		198.8		93.9	12.5	136				

Sample ID: LCS1-25940	SampType: LCS	Units: µg/L				Prep Date: 9/25/2019			RunNo: 54237		
Client ID: LCSW	Batch ID: 25940					Analysis Date: 9/27/2019			SeqNo: 1074226		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.28	0.00994	0.9936	0	129	23	146				
Aroclor 1260	1.49	0.00994	0.9936	0	150	25.6	162				
Surr: Decachlorobiphenyl	216		198.7		109	5	159				
Surr: Tetrachloro-m-xylene	268		198.7		135	12.5	136				

Sample ID: LCSD1-25940	SampType: LCSD	Units: µg/L				Prep Date: 9/25/2019			RunNo: 54237		
Client ID: LCSW02	Batch ID: 25940	Analysis Date: 9/27/2019							SeqNo: 1074227		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.35	0.00994	0.9944	0	136	23	146	1.283	4.94	30	
Aroclor 1260	1.40	0.00994	0.9944	0	141	25.6	162	1.495	6.20	30	
Surr: Decachlorobiphenyl	174		198.9		87.4	5	159		0		
Surr: Tetrachloro-m-xylene	273		198.9		137	12.5	136		0		S

Original



Date: 9/30/2019

Work Order: 1909266
CLIENT: NVL Labs, Inc.
Project: Rainier Commons

QC SUMMARY REPORT
Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: LCS21-25940	SampType: LCS2	Units: µg/L			Prep Date: 9/25/2019			RunNo: 54237			
Client ID: LCSW02	Batch ID: 25940				Analysis Date: 9/27/2019			SeqNo: 1074227			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: LCS2-25940	SampType: LCS	Units: µg/L			Prep Date: 9/25/2019			RunNo: 54237			
Client ID: LCSW	Batch ID: 25940	Analysis Date: 9/27/2019						SeqNo: 1074228			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	1.17	0.00995	0.9951	0	118	23.6	167				
Surr: Decachlorobiphenyl	152		199.0		76.5	5	159				
Surr: Tetrachloro-m-xylene	251		199.0		126	12.5	136				

Sample ID: 1909266-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 9/25/2019			RunNo: 54237			
Client ID: 91719-MH6-PCB	Batch ID: 25940	Analysis Date: 9/27/2019						SeqNo: 1074230			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.00994						0		30	
Aroclor 1221	ND	0.00994						0		30	
Aroclor 1232	ND	0.00994						0		30	
Aroclor 1242	ND	0.00994						0		30	
Aroclor 1248	ND	0.00994						0		30	
Aroclor 1254	ND	0.00994						0		30	
Aroclor 1260	ND	0.00994						0		30	
Aroclor 1262	ND	0.00994						0		30	
Aroclor 1268	ND	0.00994						0		30	
Total PCBs	ND	0.00994						0		30	
Surr: Decachlorobiphenyl	129		198.8		64.7	5	159		0		
Surr: Tetrachloro-m-xylene	185		198.8		93.3	12.5	136		0		



Sample Log-In Check List

Client Name: **NVL**
Logged by: **Clare Griggs**

Work Order Number: **1909266**
Date Received: **9/17/2019 12:58:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Required ☒
6. Was an attempt made to cool the samples? Yes ☐ No ☒ NA ☐
Samples received straight from field.
7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☐ No ☐ NA ☒
8. Sample(s) in proper container(s)? Yes ☒ No ☐
9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
10. Are samples properly preserved? Yes ☒ No ☐
11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
14. Does paperwork match bottle labels? Yes ☒ No ☐
15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
16. Is it clear what analyses were requested? Yes ☒ No ☐
17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	19.3
Sample	19.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Original



Fremont
Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 9/17/19 Page: 1 of 1

Laboratory Project No (internal): 1909205

Project Name: Rainier Commons

Special Remarks:

RL of 0.01 ug/L
NEEDED

Client: NVL LABS

Project No: 2012-494

Address: 4708 AURORA AVE N.

Collected by: MARCUS GLADDEN

City, State, Zip: SEATTLE WA 98103

Location: 3100 AIRPORT WAY S. SEATTLE

Telephone: 206-547-0100

Report To (PM): MARCUS GLADDEN

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email: MARCUS.G@NVL.LABS.COM

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*																	Comments
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DO)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 808)	Metals** (EPA 8210 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)				
1 91719 - MH6 - PCB	9/17/19	11:00	SL																	2x 1L BOTTLES
2 91719 - MH28 - PCB	9/17/19	11:00	SL																	2x 1L BOTTLES
3																				
4																				
5																				
6																				
7																				RL of 0.01 ug/L
8																				NEEDED
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day _____
(specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished x Date/Time 9/17/19 12:55

Received x Date/Time 9/17/19 12:58

Relinquished x Date/Time

Received x Date/Time